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*Further Confirmations of Prediction. By Pliny Earle Chase.**(Read before the American Philosophical Society, Feb. 21, 1879.)*

Th. von Oppolzer (*Comptes Rendus*, Jan. 6, 1879), gives elements, deduced from eight supposed planetary sun spots, which represent the fifth of my intra-Mercurial harmonic positions :

	Distance.	Time.
Von Oppolzer123	15.8 dys.
Chase, predicted.....	.120	15.1 "

This leaves only one vacancy in the chief interior series, the fourth place being still a "missing link." There is room, however, for an indefinite number of subordinate, or asteroidal harmonies, one of which has been confirmed already, by Gaillot's orbit for Watson's second planet :

	Distance.	Time.
Watson, II.....	.180	27.98 dys.
Chase.....	.183	28.48 "

The predicted harmonic denominator-difference was 4. But the denominator-difference in the principal planetary belt is only 2. The following table shows the agreement between prediction and verification :

Prediction.	Verification.	
$\frac{1}{13}$ of 3.469 = .267	De la Rue, Stewart and Loewy	.267
$\frac{1}{17}$.204	Kirkwood	.209
$[\frac{1}{19}]$.183	Watson, II	.180]
$\frac{1}{21}$.165	" I	.164.
$\frac{1}{25}$.139
$\frac{1}{29}$.120	Von Oppolzer	.123

Six remaining terms of the prediction, with a denominator-difference of 144 ($\frac{1}{33}$, $\frac{1}{177}$, $\frac{1}{321}$, $\frac{1}{465}$, $\frac{1}{609}$, $\frac{1}{753}$), represent, as I have already shown,* harmonies of rotation and revolution, thus confirming my hypothesis that rotation is due to the collisions of orbital particles, in the neighborhood of a nuclear focus.

Lescarbault's observation is one of the three for which the exact time is given. Von Oppolzer attaches special importance to those observations, and to the confirmation which they derive from the five other observations which he has compared with them. His orbit, therefore, appears to be that of the *true* Vulcan for which Leverrier looked. If this proves to be the case, other names must be sought for the remaining planets, or for the harmonic sun-spot periods, if any of them do not represent permanent planets.

* Ante, xviii, 35-6.